**How Fertigation Enhances Water Productivity, Nutrient Use Efficiency, and Farmer Incomes**

Now more than ever, water scarcity is a challenge for farmers due to climate change and rising demand. Water quality is also a concern. At the same time, we must feed our growing global population while protecting the environment.

Fertigation is a proven technique that can help farmers to sustainably grow more food in a changing climate while radically reducing the use of precious resources such as water using less fertilizer and minimizing nutrient losses* to the environment.

Fertigation is the process of applying fertilizers that can be dissolved in water through irrigation systems to simultaneously supply plants with their daily water and nutrient needs.

By combining precise amounts of nutrients with small amounts of water, fertigation can produce up to 90% nutrient use efficiency (even 100% in high tech greenhouses) and reduce nutrients losses compared to other fertilizer application methods.

Fertigation ensures high, stable crop yields and improves crop quality, allowing farmers to consistently grow produce in a wide variety of soils, climates and locations.

By delivering relatively small amounts of water to where plants need it, microirrigation-based fertigation can reduce the volume of water used compared to conventional agricultural systems and offers up to 90% water use efficiency.

Farmers in water-stressed regions can use fertigation to cultivate a larger portion of their land and produce more food with the same amount of water while using less fertilizer per unit output. This enhances water productivity, nutrient use efficiency and farmers’ incomes.

By using partially treated wastewater, fertigation can turn wastewater into a valuable resource and is considered the most economically feasible and environmentally friendly method of wastewater disposal.

Using microirrigation-based fertigation, vast areas of arid and semi-arid land and other marginal soils can be used to grow produce, helping to increase food security and local farmers’ incomes.

By automating water and fertilizer applications, fertigation reduces the amount of labor required to grow crops, which combined with its increased fertilizer use efficiency, can reduce overall growing costs.

25% of the world’s population across 17 countries are already living in regions of extremely high water-stress where there is a shortage of water. By 2050 that number is predicted to rise to 52% of the world’s projected 9.7 billion population.

With an estimated 14.4 million hectares under microirrigation systems in 2018 globally, which is less than 1% of the world’s 1.37 billion hectares of cropland, there is huge potential for the wider adoption of fertigation.

*If nutrients are not taken up by plants, they can be lost to the environment in various ways such as through leaching, run-off or emissions.